PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Rule 71.1)

Date of mailing *(day/month/year)*	13.01.2005
Applicant's or agent's file reference: RLL-307WO	**IMPORTANT NOTIFICATION**

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/IB 03/04664	22.10.2003	22.10.2002

Applicant
RANBAXY LABORATORIES LIMITED et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:	Authorized Officer
European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Nielsen-Hannerup, A Tel. +49 89 2399-7739

MRL

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference RLL-307WO	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/IB 03/04664	International filing date *(day/month/year)* 22.10.2003	Priority date *(day/month/year)* 22.10.2002
International Patent Classification (IPC) or both national classification and IPC A61K31/522		
Applicant RANBAXY LABORATORIES LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
18.05.2004	13.01.2005
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Zimmer, B Telephone No. +49 89 2399-8600

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/IB 03/04664

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-11 as originally filed

Claims, Numbers

1-38 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐ the language of publication of the international application (under Rule 48.3(b)).

   ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐ contained in the international application in written form.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority in written form.

   ☐ furnished subsequently to this Authority in computer readable form.

   ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description, pages:

   ☐ the claims, Nos.:

   ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 33-36 with respect to industrial applicability

because:

☒ the said international application, or the said claims Nos. 33-36 with regard to industrial applicability relate to the following subject matter which does not require an international preliminary examination (specify):

see separate sheet

☐ the description, claims or drawings *(indicate particular elements below)* or said claims Nos. are so unclear that no meaningful opinion could be formed *(specify)*:

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the Standard.

☐ the computer readable form has not been furnished or does not comply with the Standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-36
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-36
Industrial applicability (IA)	Yes:	Claims	1-32
	No:	Claims	

2. Citations and explanations

see separate sheet

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

Claims 33-36 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of these claims (Art. 34(4)(a)(I) PCT).

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

   D1: US-A-4 642 346 (CHAN TAI W ET AL) 10 February 1987 (1987-02-10)
   D2: WO 98/10768 A (GLAXO GROUP LTD ;LUDWIG JOHN (US)) 19 March 1998 (1998-03-19)
   D3: US-A-4 355 032 (MARTIN JOHN C ET AL) 19 October 1982 (1982-10-19)

2. Clarity

   The use of the terms "about" and "approximately" in the claims and description is vague and indefinite and thus rendering the scope of the claims unclear, cf. Art. 6 PCT.

3. Novelty

   None of the cited prior art documents discloses a pharmaceutical composition comprising ganciclovir having more than 1% water content and one or more pharmaceutically acceptable excipients.
   Therefore, the subject-matter of independent claims 1, 15, 33 and 37 of the present application as well as the claims depending thereupon seems to be new (Art. 33(2) PCT).

4. Inventive Step

Although the subject-matter of the present application seems to be new in view of the cited prior art it does not involve an inventive step for the following reasons:

4.1 D1, which is regarded as closest prior art, discloses the preparation of stable, anhydrous ganciclovir, which contains less than 1% water (col. 2, l. 10-13, examples).
Due to the unclear term "about" used in the claims of the present application ganciclovir having less than 1% water is also encompassed by said expression.
D1 thus differs from the subject-matter of the present application in that it is not suitable for a pharmaceutical composition as one or more pharmaceutically acceptable excipients is missing.

In view of the cited prior art the technical problem of the present patent application therefore is the provision of a stable pharmaceutical preparation comprising ganciclovir.

The combination of ganciclovir with an excipient to form a pharmaceutical composition is absolutely obvious for a person skilled in the art and does not involve an inventive step.

4.2 Even if the term "about" were deleted from the claims, the subject-matter of the present application would not be inventive over D1 or a combination of D2 and D3 for the following reasons:

The use of ganciclovir of a water content of more than 1% would not seem to be inventive in view of D1, which discloses exactly this water content of 1% as the upper limit.

Prior art document D2 also solves problem of providing stable formulations, which do not lose potency, nor discolour nor form insoluble substances or complexes (p. 2, l. 4-8). D2 discloses formulations for the topical application to the eye comprising ganciclovir prepared according D3 (p. 3, l. 19-21), which is identical with ganciclovir hydrate (see D1: col. 1, l. 15-16); these formulations are aqueous.
Thus, it is known from D2 that aqueous formulations of ganciclovir hydrate are stable.

4.3 As the therapeutic use of ganciclovir for the treatment of infections caused by cytomegalovirus and herpes simplex virus is also known from the prior art (see D3: col. 3, l. 13-17), the subject-matter of claims 33-36 is not inventive over the cited prior art.

4.4 As a result, in view of the cited prior art pharmaceutical formulations of ganciclovir with a water content of above 1 % according to independent claim 1, their process of preparation according to independent claim 15 and their therapeutic use according to independent claim 33 are obvious for a person skilled in the art (Art. 33(3) PCT).

4.5 Dependent claims 2-14, 16-32 and 34-36 do not appear to contain any additional features which involve an inventive step when combined with the subject-matter of any claim to which they refer. Dependent claims are only allowable when related to a patentable independent claim (Rule 6.4 PCT).

5. The subject-matter of claims 37 and 38 seems to be both novel and inventive over the cited prior art (Art. 33(2) and (3) PCT).

6. As the expressions "hereby incorporated by reference" (p. 7, l. 4) and "not intended to limit the scope" (p. 8, l. 20/21) as well as the paragraph on p. 11, l. 11-17 are not deleted in the description the requirements of Rules 5 and 9.1 PCT are not met.

7. For the assessment of the present claims 33-36 on the question whether they are industrially applicable, no unified criteria exist in the PCT Contracting States. The patentability can also be dependent upon the formulation of the claims. The EPO, for example, does not recognize as industrially applicable the subject-matter of claims to the use of a compound in medical treatment, but may allow, however, claims to a known compound for first use in medical treatment and the use of such a compound for the manufacture of a medicament for a new medical treatment.